

TO THE SPECIES DISTINGUISHING OF WEST-PALAEARCTIC ROBBER FLIES OF THE GENUS *HOPLOTRICLIS* HERMANN, 1920 (DIPTERA: ASILIDAE)

D. M. Astakhov

Volgograd State University,
prospect Universitetsky, 100,
Volgograd, 400062, Russia.

E-mail: dmitriy_astachov@mail.ru

Astakhov, D. M. To the Species Distinguishing of West Palaearctic Robber Flies of the Genus *Hoplotriclis* Hermann, 1920 (Diptera: Asilidae). Summary. Details of the male genitalia of *Hoplotriclis artemisicola* Lehr, 1969 are illustrated for the first time. Itemized photographs of the external structures, notes on the ecology and mode of life of *H. pallasii* (Wiedemann, 1828) and *H. artemisicola* Lehr, 1969 are given.

Key words: robber flies, morphology, male genitalia, Asilidae, *Hoplotriclis*.

Астахов, Д. М. До розпізнавання західнопалеарктичних ктирів роду *Hoplotriclis* Hermann, 1920 (Diptera: Asilidae). Резюме. Вперше описано деталі будови геніталій самця *Hoplotriclis artemisicola* Lehr, 1969. Наведено детальні світліни зовнішньої будови та геніталій самця ктирів *H. pallasii* (Wiedemann, 1828) та *H. artemisicola* Lehr, 1969 з нотатками про екологію та спосіб життя видів.

Ключові слова: ктири, морфологія, геніталії самця, Asilidae, *Hoplotriclis*.

Астахов, Д. М. К распознаванию западнопалеарктических ктырей рода *Hoplotriclis* Hermann, 1920 (Diptera: Asilidae). Резюме. Впервые описываются детали строения гениталий самца *Hoplotriclis artemisicola* Lehr, 1969. Приводятся подробные фотографии деталей внешнего строения и гениталий самцов ктырей *H. pallasii* (Wiedemann, 1828) и *H. artemisicola* Lehr, 1969 с замечаниями по экологии и образу жизни видов.

Ключевые слова: ктири, морфология, гениталии самца, Asilidae, *Hoplotriclis*.

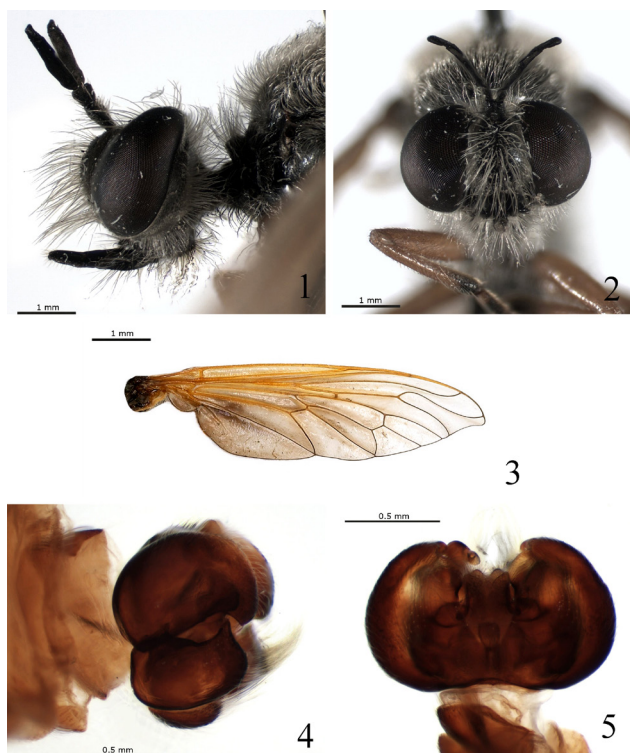
Introduction

The monotypic genus *Hoplotriclis* Hermann, 1920 (ex *Dasypogon*) with only species *Hoplotriclis pallasii* (Wiedemann, 1828) (Hermann, 1920). Species *Hoplotriclis pallasii* (Wiedemann, 1828) (Fig. 1–12) is known from Lower Volga area (Astakhov, 2011), North Caucasus (Richter, 1968), Romania, Greece, Crimea, Turkey, Kazakhstan (Engel, 1930; Lehr, 1970; Lehr, 1988) and has a west-tethys type of areal (Astakhov, 2015). Second species of genus *Hoplotriclis* is known from Kazakhstan and Turkmenia (Lehr, 1969, 1970; Lehr, 1988). The first description *Hoplotriclis artemisicola* Lehr, 1969 (Fig. 13–27) gives a detailed text description, but completely excludes illustration of details of external structure, as well as has no data about structure of male genitalia of this species. We examined a paratypes from collection of

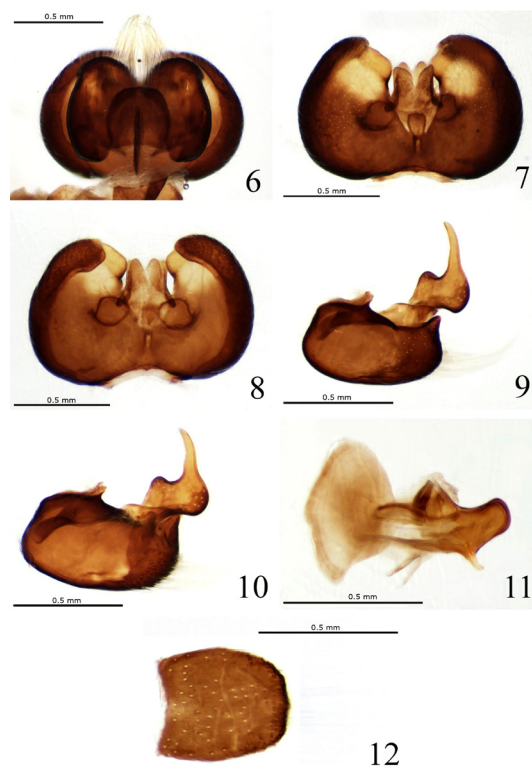
Zoological Institute of the Russian Academy of Sciences in St. Petersburg (ZISP) with P. A. Lehr's determination as well as prepared particularized photographs of details of external structure and details of male genitalia of *H. artemisicola*.

Hoplotriclis pallasii (Wiedemann, 1828) hunts over a surface of grassy vegetation and bushes and belongs to ecological group of epiphytobionts (Astakhov, 2013). *Hoplotriclis artemisicola* Lehr, 1969 is ranged in grassland steppe and eremic slopes of foothills and plains (Lehr, 1970) and probably also belongs to epiphytobionts group.

On the base of earlier published (Lehr, 1969, 1970; Astakhov, 2015) and new data there is drawn a detailed identification key of species of *Hoplotriclis* Hermann, 1920, and for the first time a description of male genitalia of *Hoplotriclis artemisicola* Lehr, 1969 is given.



Figs 1–5. *Hoplotriclis pallasii* Wiedemann: 1 — head, lateral; 2 — head, front view; 3 — wing; 4 — genitalia, lateral view; 5 — genitalia, dorsal view (after Astakhov, 2015, with changes).



Figs 6–12. *Hoplotriclis pallasii* Wiedemann: 6 — genitalia, ventral view; 7 — epandrium, dorsal view; 8 — epandrium, ventral view; 9 — lateral external surface of gonopod; 10 — lateral internal surface of gonopod; 11 — aedeagus, lateral view; 12 — hypandrium (after Astakhov, 2015, with changes).

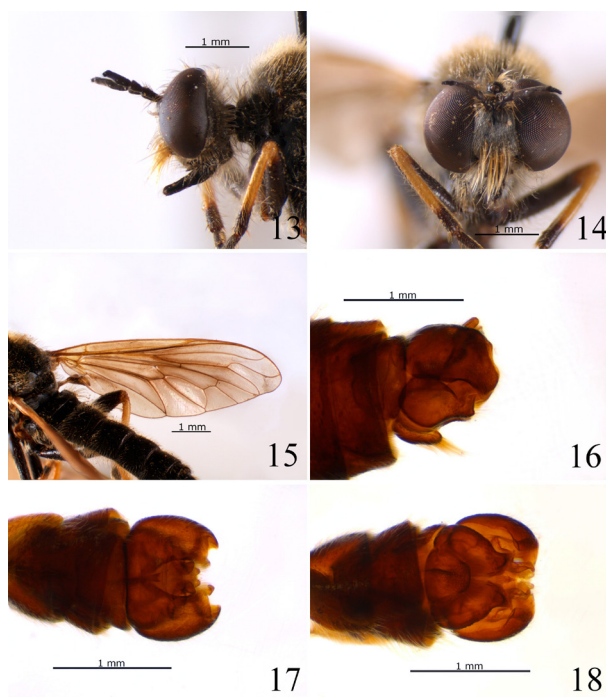
Key to the species of *Hoplotriclis* Hermann, 1920

1. The facial swelling and mesonotum are covered with dense white hairs (Fig. 1–2); postpedicel is more than 2 times longer than two basal joints of antennae (Fig. 1–2). Male genitalia (Fig. 4–12) are turned on 90°; epandrium is medially divided into halves, is integral only at the bottom, covered with thin white hairs; gonocoxite is short, pointed at top, with dense white hairs on back edge; gonostylus at top is extended in a long appendix; aedeagus is short, rectangular at top, apodeme of ejaculator is large; hypandrium is small and cylindrical, its surface is covered with hairs, especially long on the back edge. 12–15 mm.

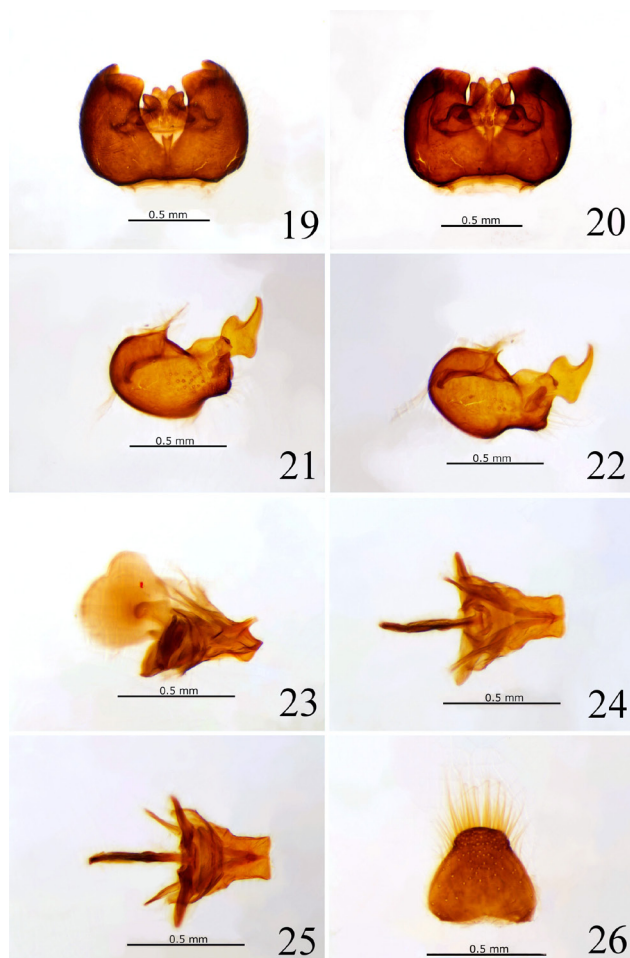
..... *H. pallasii* Wiedemann

- The facial swelling under the base of antennae is naked, in the lower part is covered with dense yellowish-white hairs (Fig. 13–14, 27). Mesonotum is covered with thick white and yellowish-white hairs. (Fig. 13–14, 27); postpedicel is approximately equal on length to basal joints of antennae (Fig. 13, 27). Genitals of a male (Fig. 16–26) are turned on 90°, medially divided into halves, is integral only at the bottom, covered with short thin white hairs; gonocoxite is short, ventrally with indentation on back edge, covered with rare short white hairs on back edge; gonostyle at top is extended in a short strong appendix; aedeagus is extended and triangle shaped, apodeme of ejaculator is small; hypandrium is trapezoidal with numerous long yellowish-white hairs on the back edge. 8–14 mm.

..... *H. artemisicola* Lehr



Figs 13–18. *Hoplotriclis artemisicola* Lehr, 13 — head, lateral; 14 — head, front view; 15 — wing; 16 — genitalia, lateral view; 17 — genitalia, dorsal view; 18 — genitalia, ventral view.



Figs 19–26. *Hoplotriclis artemisicola* Lehr: 19 — epandrium, dorsal view; 20 — epandrium, ventral view; 21 — lateral external surface of gonopod; 22 — lateral internal surface of gonopod; 23 — aedeagus, lateral view; 24 — aedeagus, dorsal view; 25 — aedeagus, ventral view; 26 — hypandrium.

List of species

Hoplotriclis artemisicola Lehr, 1969

Syn. *Hoplotriclis birulai* Lehr, 1970.

Material examined: Kazakhstan: Alma-Ata Prov.: the foothills between Deep and Direct slits, 3.07.1936, 1 ♂ (paratype) (A. Birulya) (P. Lehr det.); west of the village Uzun-agach, 22.05.1964, 1 ♂ (paratype?) (P. Lehr) (P. Lehr det.); west of the village Targap, 9.06.1964, 1 ♀ (paratype?) (P. A. Lehr) (P.A.Lehr det.).

Hoplotriclis pallasii (Wiedemann, 1828)

Material examined: Russia: Volgograd Prov.: Kalach-on-Don distr.: Logovskii farm, 16–17.06.2011, 1 ♂, 1 ♀; [farmstead] Logovskii farm, 4.06.2012, 1 ♀; Pervomayskii farm, 5–6.06.2010, 1 ♂, 2 ♀ (D. Astakhov); Stavropol prov.: Pyatigorsk, 5.06.1899, 1 ♀ (Demokidov) (V. A. Richter det.); Crimea: Kerch, 6.05.1900, 1 ♀ (A. Yatsentkovskiy).

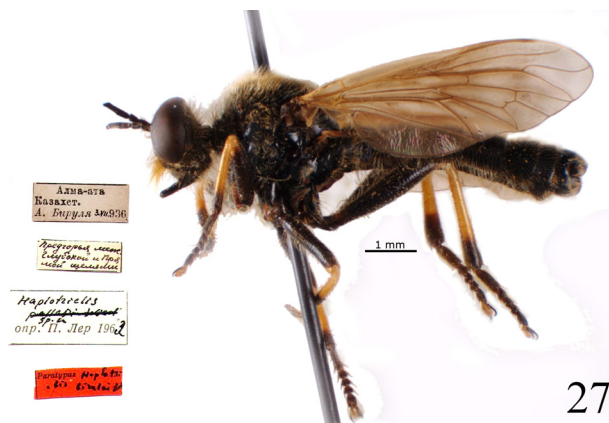


Fig. 27. Male paratype *Hoplotriclis artemisicola*, habitus, lateral view.

Acknowledgments

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